

U.S. Patent Application No. 10/689,756
Amendment dated February 20, 2008
Reply to Office Action of December 13, 2007

REMARKS/ARGUMENTS

Reconsideration and continued examination of the above-identified application are respectfully requested.

By way of this amendment, claims 1-7, 9-10, and 12-14 are pending. Claims 1 and 4 have been amended, claims 8 and 11 have been canceled, and claims 13 and 14 have been added. Support for the amendment and new claims can be found throughout the figures as originally filed and the present application, for example, page 6, lines 1-25, and page 7, lines 1-3 of the originally filed application. Accordingly, no questions of new matter should arise and entry of this amendment is respectfully requested.

Rejection of claims 1-12 under 35 U.S.C. §103(a) – White et al. in view of Long et al.

At page 2, item 4, of the Office Action, the Examiner rejects claims 1-12 under 35 U.S.C. §103(a) as being unpatentable over White et al. (U.S. Patent No. 4,972,494) in view of newly cited Long et al. (U.S. Patent No. 4,860,096). The Examiner asserts that White et al. discloses an image processing apparatus like the invention of claim 1, including a trigger receiving section to receive a trigger from the outside, an image processing section for processing image pickup data picked up by the camera, and a statistical processing section for processing the image data. The Examiner acknowledges that White et al. does not disclose a trigger generation section for generating a predetermined number of internal triggers at predetermined intervals when the trigger receiving section receives the trigger from the outside, and now cites Long et al. to show the generation of a predetermined number of internal triggers. This rejection is respectfully traversed.

Claims 1 and 4 recite the feature of a statistical processing section that calculates

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variations between image data, namely, the image pickup data picked up by the camera after receipt of the trigger from the outside, and the image pickup data initiated by the pre-determined number of internal triggers. Further, claims 1 and 4 also recite the statistical processing section determines and eliminates abnormal image data.

The statistical processing section of the present application compares the image data from both the image data received from the external trigger, and the image data received from the predetermined amount of internal triggers. Both the external trigger and the internal trigger or triggers tell the camera to capture an image. By comparing and contrasting image data from multiple images, the statistical processing section can create one resulting image using image data taken from all of the images. By gathering image data from a plurality of images a more accurate image can be displayed. Furthermore, abnormal image data can be determined and eliminated by the statistical processing to further the accuracy of the image processing. This is something that White et al. and Long et al. alone or in combination, fail to teach or suggest.

The Examiner asserts that White et al., col. 4 lines 12-17, and col. 8 line 52 thru col. 9 line 18, disclose the statistical processing section of the present application. The applicants disagree. These sections of White et al. only show capturing an image of a package, comparing the image data to reference data, and then determining to reject a package. An external computer has reference data that is previously stored on the computer. The reference data represents what the desired package configuration should look like. The image in White et al. is then compared to the "reference data" to determine if the package is defective. Once a defective package is determined the reject station then removes the package. As stated in White et al, "Each scan of the camera is compared with corresponding stored reference data to determine whether the output signals produced by the package being inspected match the stored signals." (Col. 8, lines

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56-60) This clearly differs from the present application. White et al. fails to teach or suggest a statistical processing section that compares and determines variations between multiple images of the same workpiece. The images in White et al. are separately compared to a stored reference image. Conversely, the present application does require the use of a reference image. The images captured by the camera are compared with each other and the variations are statistically processed. These variations can be used to create one resulting image of a workpiece. As one skilled in the art will appreciate, the statistical processing section of the present application is completely different from the reference comparison of White et al. In view of this, the present application distinguishes from White et al.

The Examiner combines White et al. with newly cited Long et al., and asserts that Long et al. suggests the use of internal triggers capturing workpiece data at predetermined intervals. Even if such combination were proper, White et al. in view of Long et al. fails to teach or suggest the presently claimed invention. Long et al. shows a motion analysis tool for capturing a plurality of images. The images are taken of an object in repetitive motion. The plurality of images are advanced a certain amount of time and displayed as a slow motion simulation of the object. Long et al. fails to teach or suggest a statistical processing section that processes a plurality of images to calculate variations between them. As a result, the present claims distinguish over Long et al. Accordingly, the rejection should be withdrawn.

The Examiner is encouraged to contact the undersigned regarding the present application should there be any remaining issues with respect to the patentability of the present application.

CONCLUSION

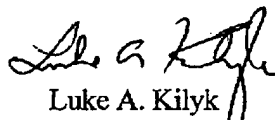
In view of the foregoing remarks, the applicant respectfully requests the reconsideration of

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this application and the timely allowance of the pending claims.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0925. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,


Luke A. Kilyk
Reg. No. 33,251

Atty. Docket No. 3140-015
KILYK & BOWERSOX, P.L.L.C.
400 Holiday Court, Suite 102
Warrenton, VA 20186
Tel.: (540) 428-1701
Fax: (540) 428-1720